

# TA-V7700

## SERVICE MANUAL

AEP Model  
UK Model



### SPECIFICATIONS

Continuous RMS power (both channels driven)

80 W + 80 W (6 ohms) at 1 kHz  
70 W + 70 W (6 ohms) at 40 Hz – 20 kHz

Music power output 300 W

Harmonic distortion Less than 0.02% at rated output

IM distortion (60 Hz: 7 kHz = 4 : 1)

Less than 0.02% at rated output

Frequency response

PHONO: RIAA equalization curve  
±0.5 dB

TUNER

TAPE 1, 2

VIDEO/CD

ADAPTOR

10 Hz – 50 kHz  $\pm 0.5$  dB

Residual noise Less than 130  $\mu$ V (6 ohms network A)  
Input

Input	Sensitivity	Impedance	S/N (network, input level)
PHONO	2.0 mV	50 kohms	70 dB (A, 2.0 mV)
TUNER TAPE 1, 2 VIDEO/CD ADAPTOR	150 mV	50 kohms	91 dB (A, 150 mV)

DA converter

Frequency 4 Hz – 20 kHz  $\pm 0.5$  dB  
S/N More than 95 dB

Outputs

Output	Type	Voltage	Impedance
DAT OUT ADAPTOR TAPE 1, 2 VIDEO	Phono	150 mV	1 kohms
HEAD- PHONES	Stereo phone	Accepts headphones of 8 ohms or more.	

Tone controls

BASS  $\pm 10$  dB (at 100 Hz)  
TREBLE  $\pm 10$  dB (at 10 kHz)  
BASS BOOST +10 dB (at 20 Hz, 1 W)

General

Power requirements

AEP, West Germany model: 220V AC, 50/60Hz  
UK model: 240V AC, 50/60Hz

Power consumption

AEP, West Germany model: 150W  
UK model: 350W

AC outlet 1 Unswitched, 200 W max.

Dimensions Approx. 355 × 130 × 368 mm (w/h/d)

Weight Approx. 10.2 kg (22 lb 8 oz), net

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\Delta$  OR DOTTED LINE WITH MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

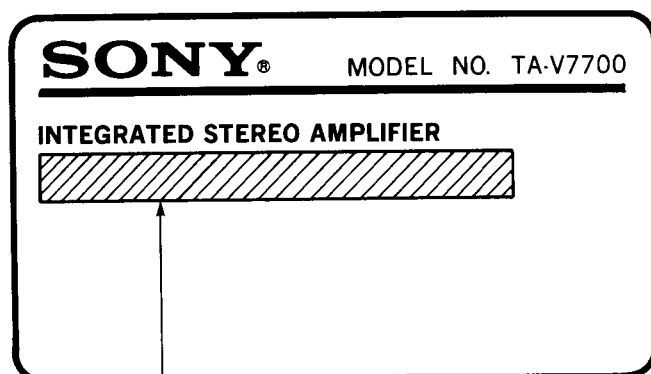


STEREO AMPLIFIER  
**SONY**®

## SECTION 1 GENERAL

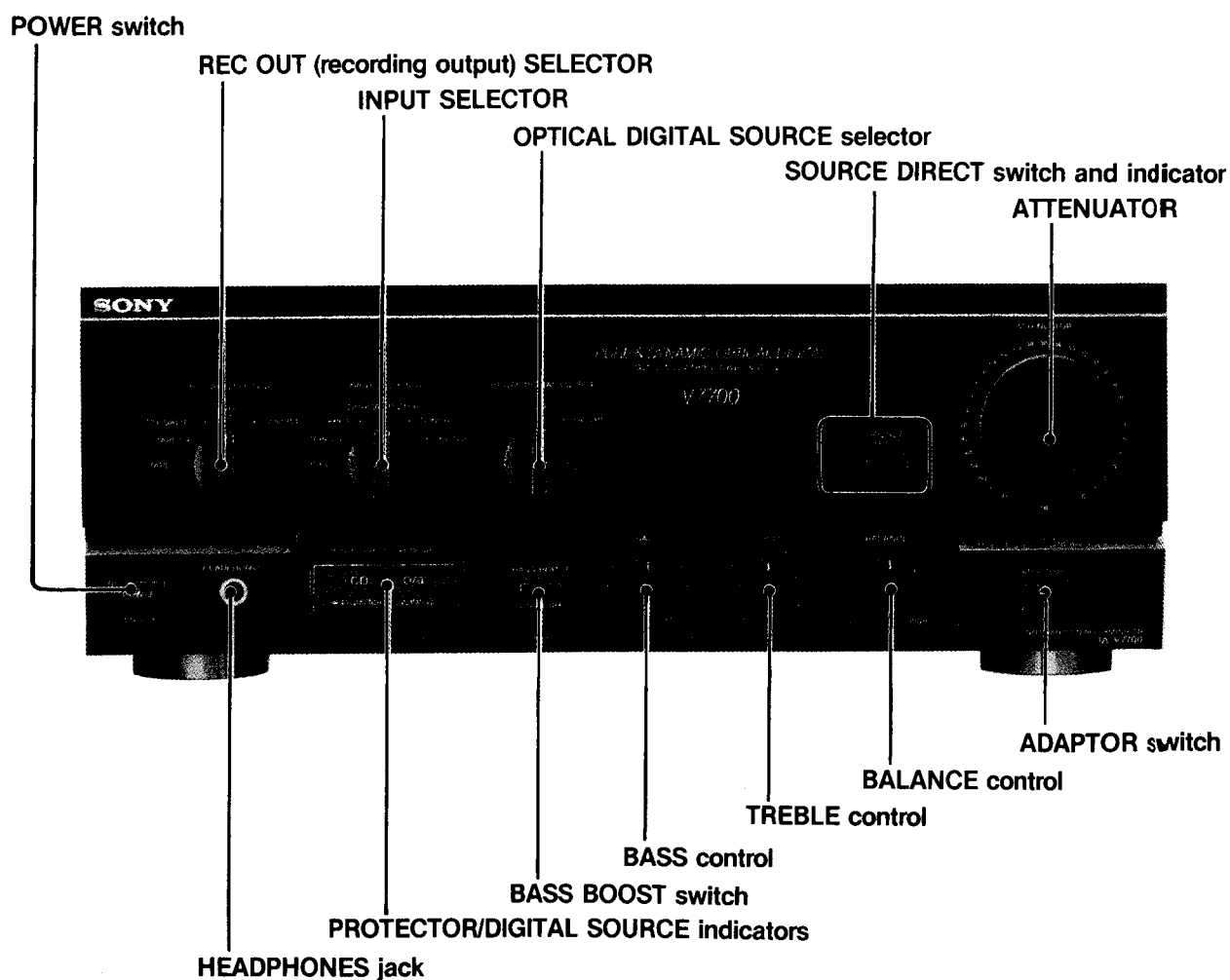
### 1-1. MODEL IDENTIFICATION

— Specification Label —



AEP model, WEST GERMANY (WG)	model: AC: 220V~	50/60Hz	150W
UK	model: AC: 240V~	50/60Hz	350W

### 1-2. PARTS IDENTIFICATION



## SECTION 2 ELECTRICAL ADJUSTMENT

### Before adjustment :

1. Make DC bias adjustment when replacing the following power transistors.

Q401,404—410,413,414  
Q451,454—460,463,464

2. Turn VR401 and VR451 fully counterclockwise before power switch is turned on.

### DC BIAS Adjustment

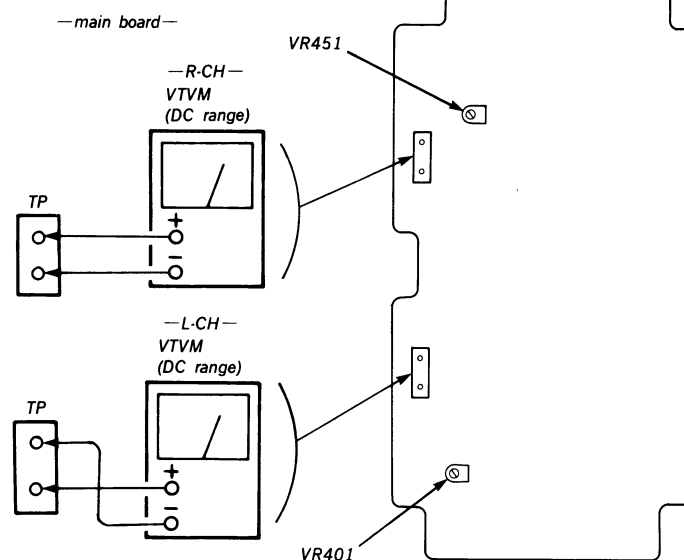
#### Setting :

- No signal (no load)
- ATTENUATOR control: MIN (minimum)

#### Procedure :

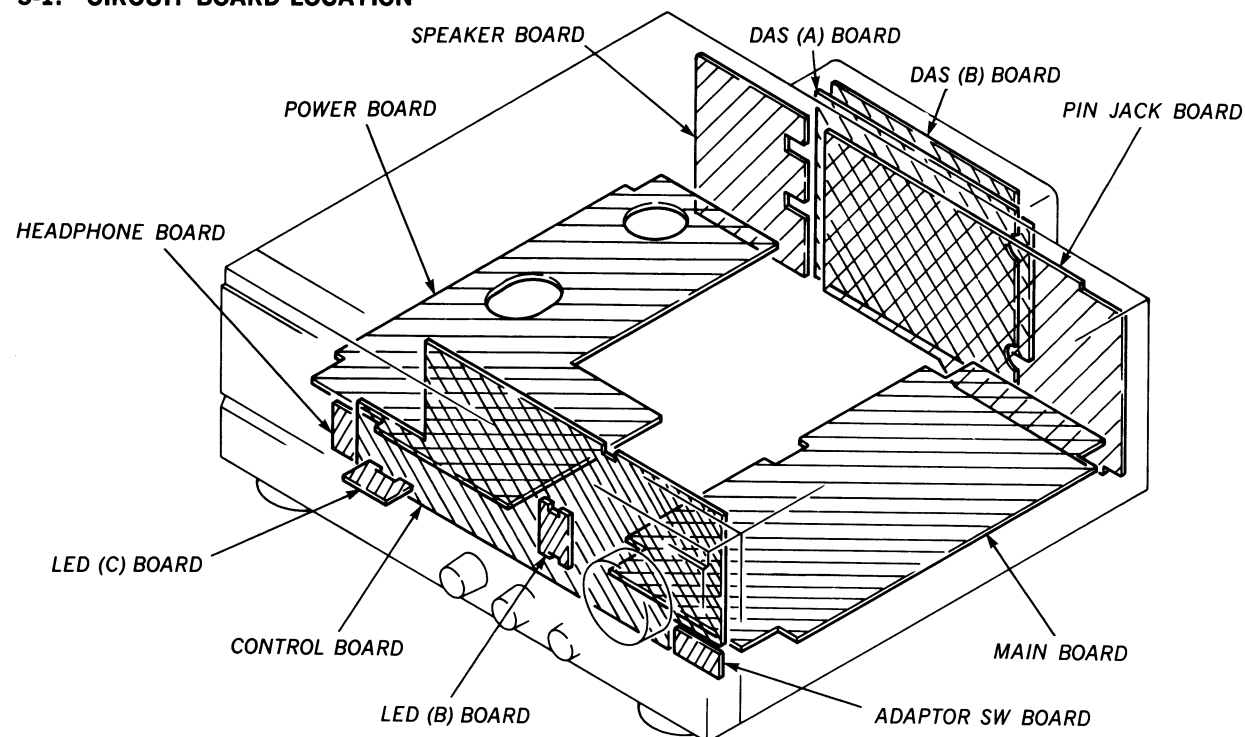
1. Connect VTVM across TP.
2. Adjust VR401 (L-CH) and VR451 (R-CH) for 6mV reading on VTVM.

#### Adjustment Location :



## SECTION 3 DIAGRAMS

### 3-1. CIRCUIT BOARD LOCATION



### • Semiconductor Lead Layouts

<b>CXD1076P</b> <b>TDA1541-N5</b> 	<b>TC74HC112P</b> <b>TC74HC123P</b> 	<b>2SC634SP</b> 	<b>US1060M</b> <b>10E2N</b> 
<b>CXD1088Q</b> 	<b>NJM5532D-D</b> 	<b>2SC1841-PA</b> <b>2SC3622A-L</b> 	<b>SEL2210S-C</b> <b>SEL2810A-C</b> 
<b>CX23065</b> <b>M5218L</b> <b>μPC1237HA</b> 	<b>BA1A4M</b> <b>BN1A4M</b> <b>2SA1175</b> 	<b>2SC2259</b> 	<b>SEL2510C</b> 
<b>M5F7805</b> <b>M5F7815</b> <b>M5F7905</b> <b>M5F7915</b> 	<b>2SA916-L</b> <b>2SC1941</b> 	<b>2SD2012</b> 	
<b>MC74HC74N</b> <b>SN74LS624N</b> <b>TC74HC04P</b> <b>TC74HC00P</b> <b>TC74HC393P</b> <b>TC74HC86P</b> 	<b>2SA1491</b> <b>2SA1492</b> <b>2SC3855</b> <b>2SC3856</b> 	<b>RBV-602-01</b> 	<b>SEL1513E-CD</b> 
	<b>2SA1684-L</b> <b>2SC4431-L</b> 		

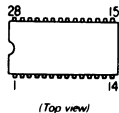
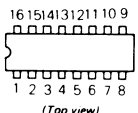

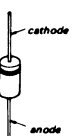
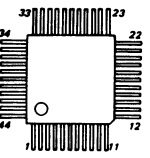
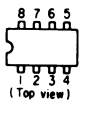

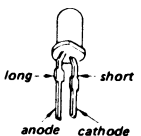
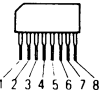


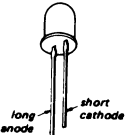
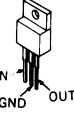


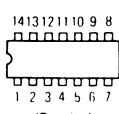

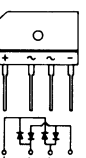
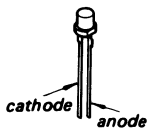
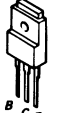
### • Semiconductor

Ref. No.	Loc
D301	G-24
D302	G-24
D303	J-15
D304	J-15
D306	J-14
D307	J-13
D308	J-13
D309	J-20
D311	G-10
D312	G-10
D314	G-9
D315	G-10
D401	I-23
D402	I-24
D403	I-24
D404	H-24
D405	H-24
D406	H-10
D407	H-10
D451	C-24
D452	C-24
D453	C-24
D454	I-24
D455	I-24
D501	H-4
D506	C-8

### • Semiconductor

Ref. No.	Loc
IC701	B-1
IC702	F-2
IC703	G-2
IC704	F-2
IC705	B-2
IC706	D-3
IC707	B-4
IC708	G-3
IC709	D-4
IC710	C-4
IC711	C-3
IC712	B-5
IC713	D-6
IC714	F-6
IC715	D-2
IC716	C-2
Q701	G-6
Q702	G-5
Q703	D-6
Q704	D-5
Q705	G-4
Q706	B-6
Q707	A-6
Q708	B-6
Q709	B-6

● Semiconductor Lead Layouts

<div>CXD1076P TDA1541-N5</div> <div></div>	<div>TC74HC112P TC74HC123P</div> <div></div>	<div>2SC634SP</div> <div></div>	<div>US1060M 10E2N</div> <div></div>
<div>CXD1088Q</div> <div></div>	<div>NJM5532D-D</div> <div></div>	<div>2SC1841-PA 2SC3622A-L</div> <div></div>	<div>SEL2210S-C SEL2810A-C</div> <div></div>
<div>CX23065 M5218L μPC1237HA</div> <div></div>	<div>BA1A4M BN1A4M 2SA1175</div> <div></div>	<div>2SC2259</div> <div></div>	<div>SEL2510C</div> <div></div>
<div>M5F7805 M5F7815 M5F7905 M5F7915</div> <div></div>	<div>2SA916-L 2SC1941</div> <div></div>	<div>2SD2012</div> <div></div>	
<div>MC74HC74N SN74LS624N TC74HCU04P TC74HC00P TC74HC393P TC74HC86P</div> <div></div>	<div>2SA1491 2SA1492 2SC3855 2SC3856</div> <div></div>	<div>RBV-602-01</div> <div></div>	<div>SEL1513E-CD</div> <div></div>
	<div>2SA1684-L 2SC4431-L</div> <div></div>		



● Semiconductor Location—Amplifier Section—

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	G-24	D507	C-8	Q409	H-24
D302	G-24			Q410	I-24
D303	J-15	IC101	C-18	Q411	H-26
D304	J-15	IC201	I-13	Q412	I-26
D306	J-14	IC251	I-15	Q413	G-26
D307	J-13	IC301	J-14	Q414	H-26
D308	J-13	IC501	E-22	Q415	H-25
D309	J-20	IC502	G-22	Q451	C-23
D311	G-10	IC503	E-22	Q453	C-23
D312	G-10	IC504	F-22	Q454	C-23
D314	G-9			Q455	C-23
D315	G-10	Q301	J-15	Q456	C-24
D401	I-23	Q302	J-15	Q457	D-26
D402	I-24	Q303	J-13	Q458	D-24
D403	I-24	Q304	J-13	Q459	C-24
D404	H-24	Q305	J-13	Q460	D-24
D405	H-24	Q306	G-11	Q461	C-26
D406	H-10	Q307	G-11	Q462	B-26
D407	H-10	Q308	H-11	Q463	E-26
D451	C-24	Q401	I-23	Q464	C-26
D452	C-24	Q403	H-23	Q465	E-25
D453	C-24	Q404	H-23		
D454	I-24	Q405	I-23		
D455	I-24	Q406	H-24		
D501	H-4	Q407	G-26		
D506	C-8	Q408	I-24		






● Semiconductor Location—D/A Converter Section—

Ref. No.	Location
IC701	B-1
IC702	F-2
IC703	G-2
IC704	F-2
IC705	B-2
IC706	D-3
IC707	B-4
IC708	G-3
IC709	D-4
IC710	C-4
IC711	C-3
IC712	B-5
IC713	D-6
IC714	F-6
IC715	D-2
IC716	C-2
Q701	G-6
Q702	G-5
Q703	D-6
Q704	D-5
Q705	G-4
Q706	B-6
Q707	A-6
Q708	B-6
Q709	B-6




● Note on Schematic Diagram—Amplifier Section—

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- % : indicates tolerance.
- Components for right channel have same values as for left channel. Reference numbers are coded from 150, 160, 250, 260, 450, 460, 470, 480.
-  : nonflammable resistor.
-  : fusible resistor.
- Switch

Ref.No.	Switch	Position
S201	ADAPTOR	OFF
S202	SOURCE DIRECT	OFF
S204	BASS BOOST	OFF
S205	OPTICAL DIGITAL SOURCE	DAT
S301	INPUT SELECTOR	PHONO
S302	REC OUT SELECTOR	SOURCE
S801	POWER	OFF

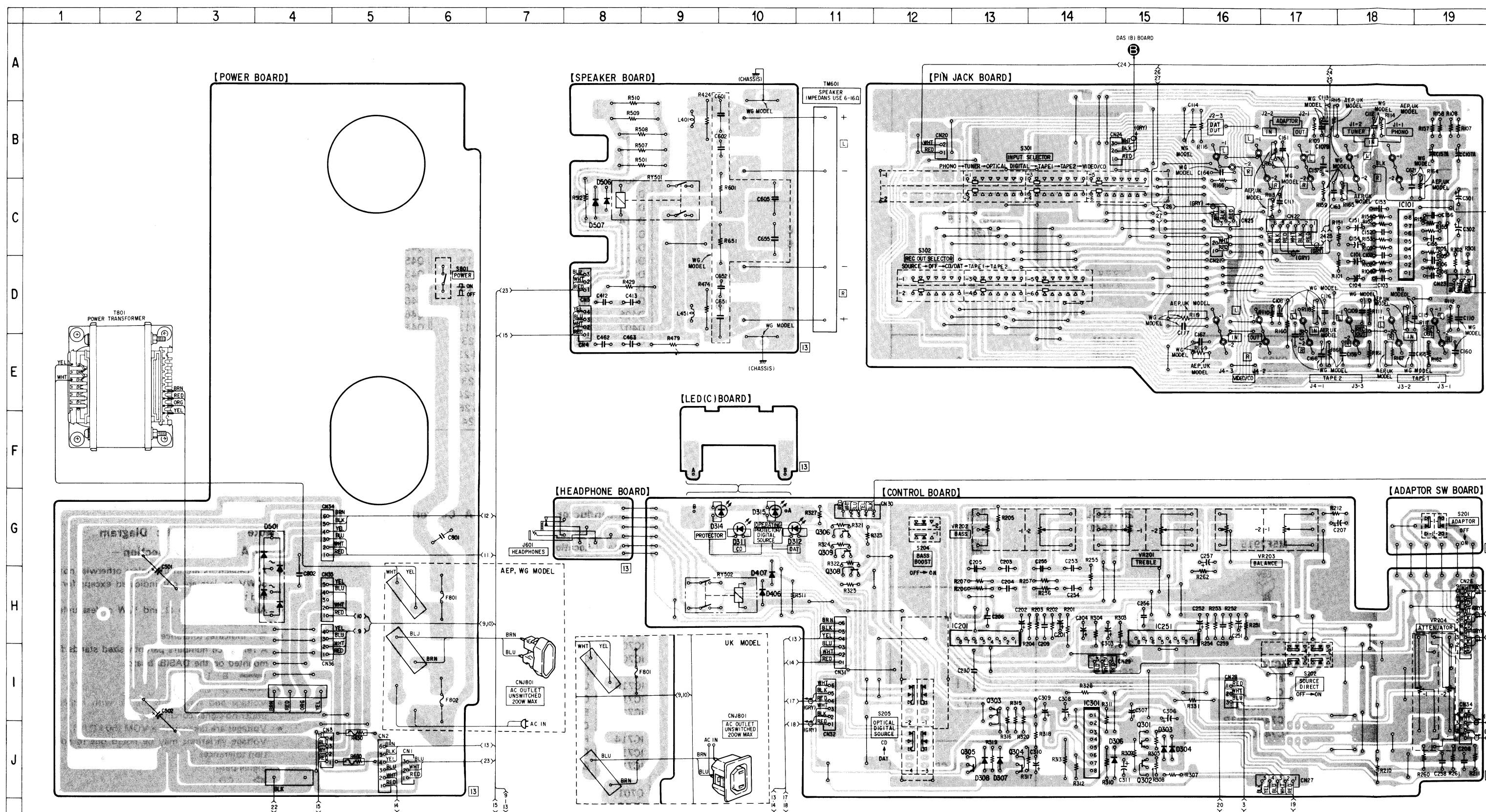
- WG model : West Germany model
-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (50  $\text{k}\Omega/\text{V}$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.  
 : PHONO  
 : CD

● Note on Schematic Diagram—D/A Converter Section—

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- % : indicates tolerance.
- A reference numbers parenthesized stands for a board mounted on the DAS(B) board.
-  : B+ Line
-  : B- Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (50  $\text{k}\Omega/\text{V}$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.  
 : CD

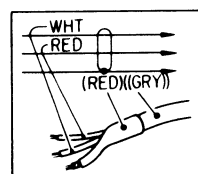
## 3-2. PRINTED WIRING BOARD—AMPLIFIER SECTION—

- Refer to page 4 for Semiconductor Lead Layouts.
- Refer to page 5 for Semiconductor Location.



## Note:

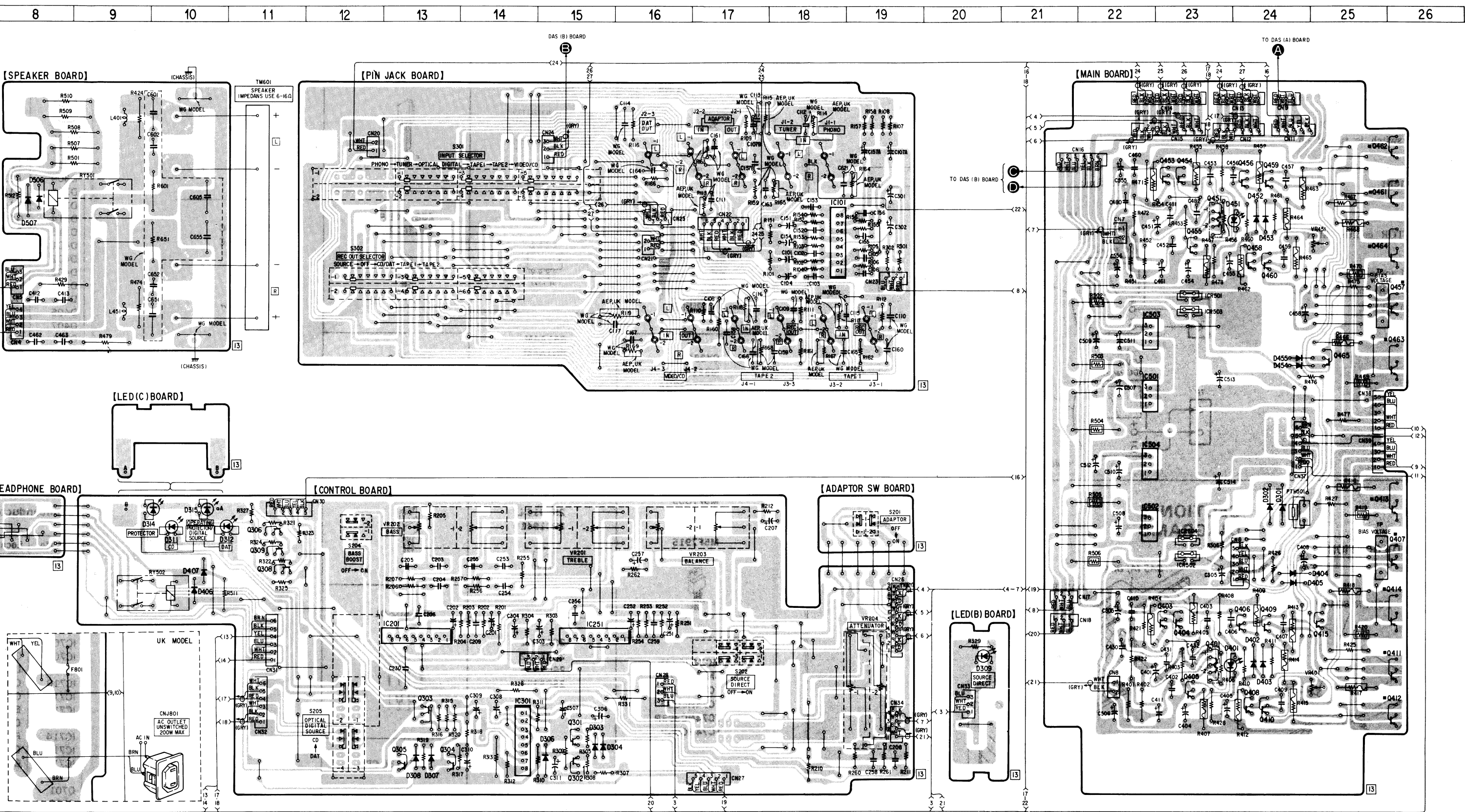
- Color code or sleeving over the end of the jacket.

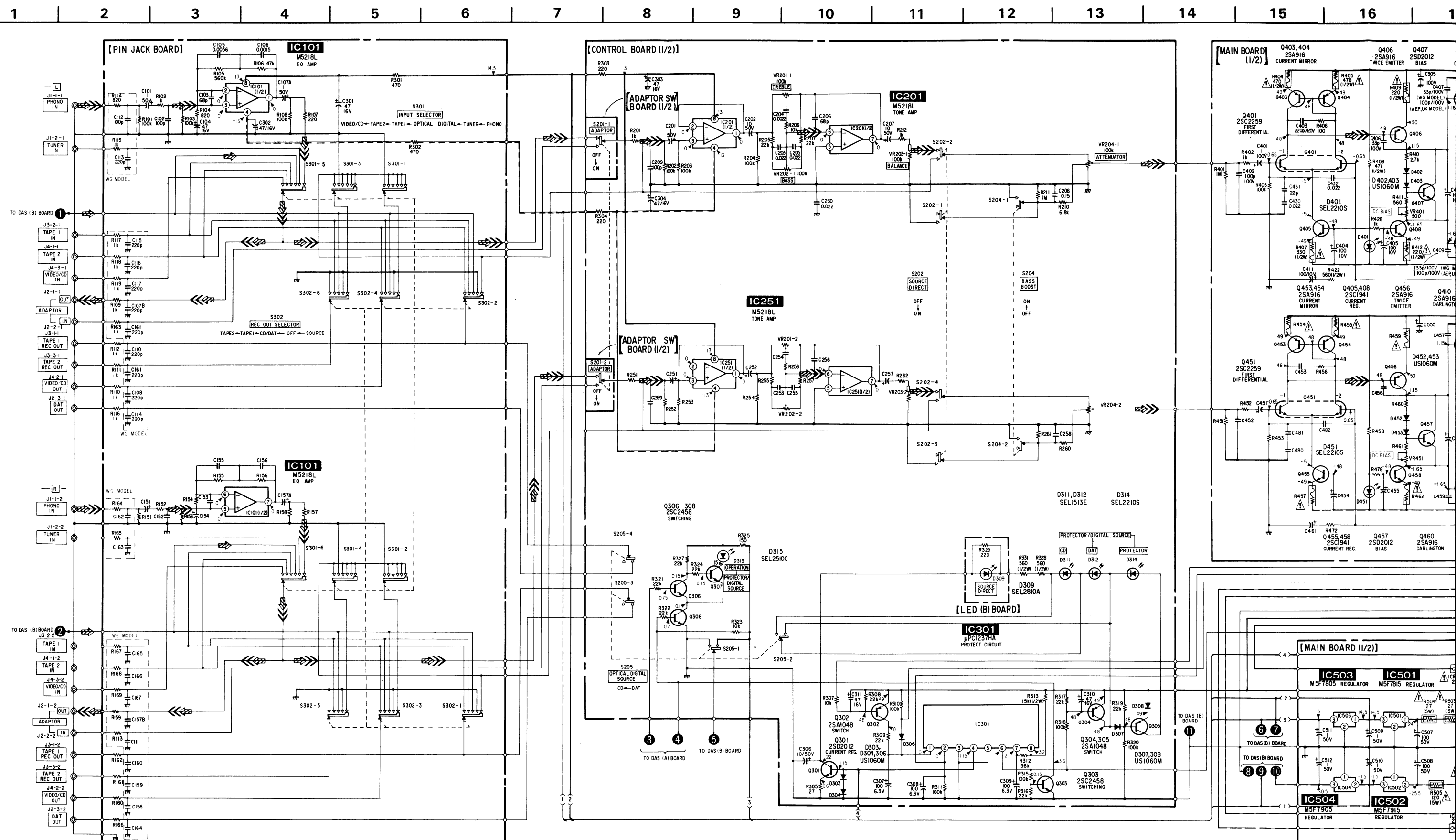


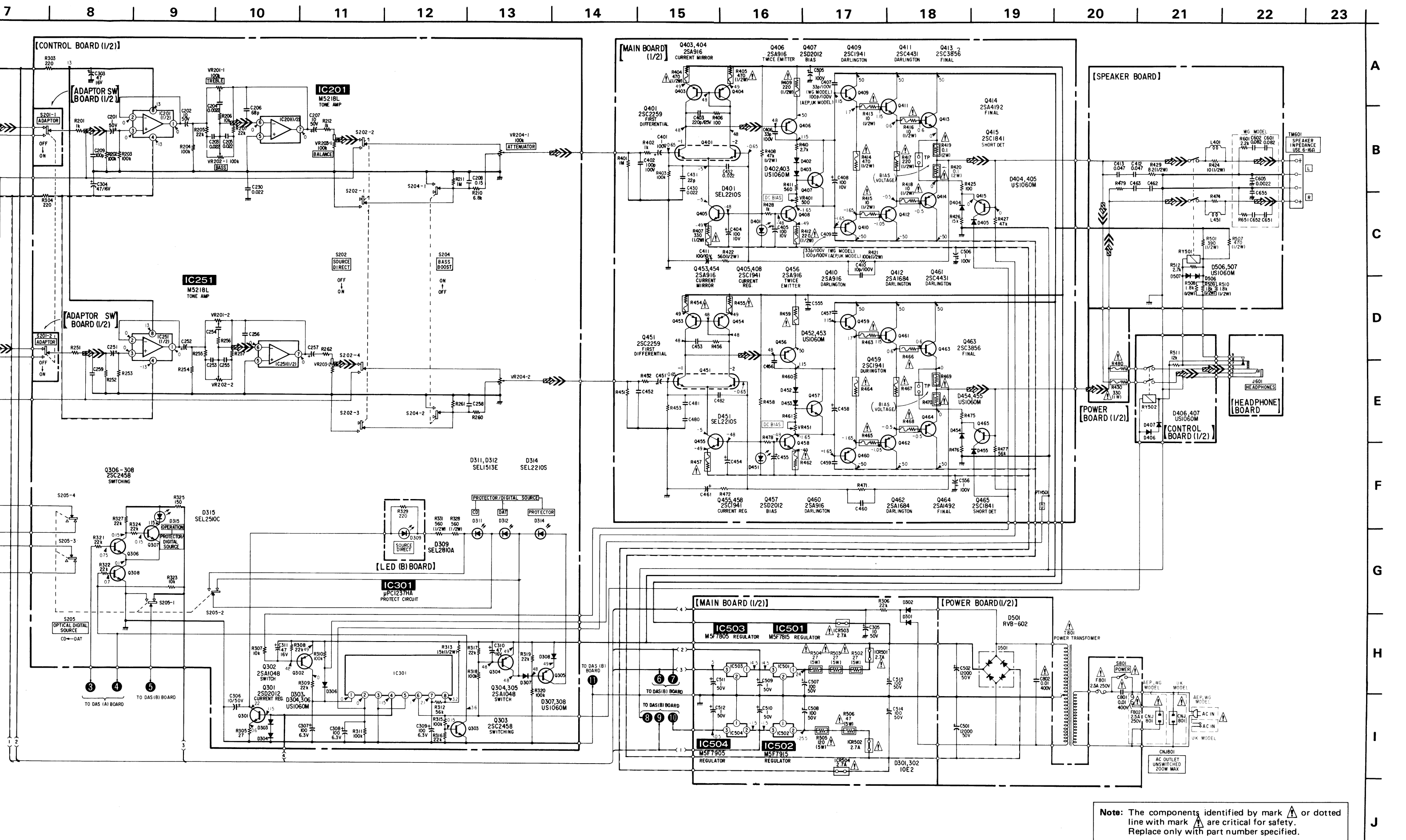
- ○ — : parts extracted from the component side.
- ■ — : parts mounted on the conductor side.
- WG model : West Germany model



Figure 4 for Semiconductor Lead Layouts.  
Figure 5 for Semiconductor Location.



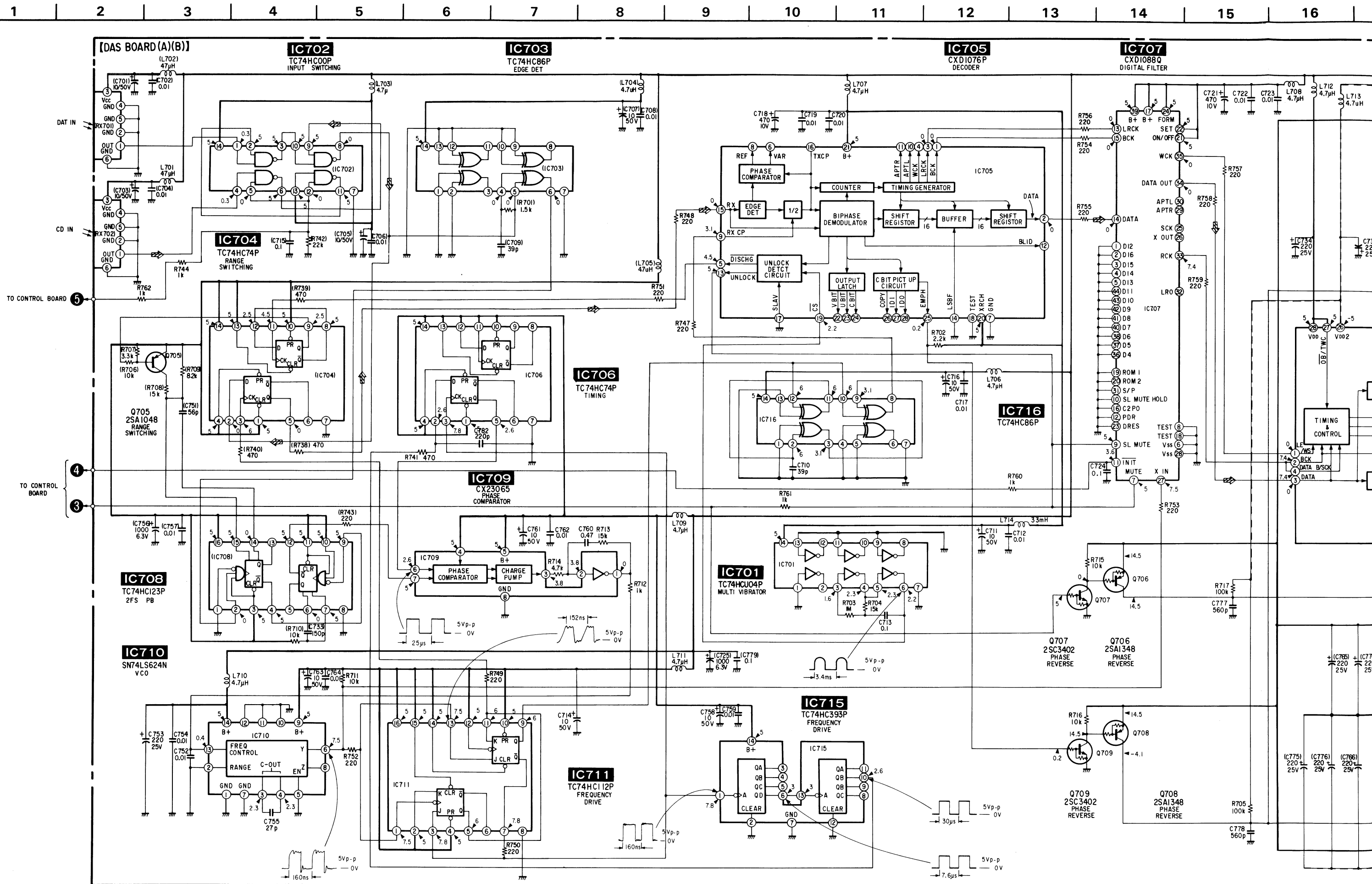


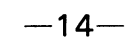




## 3-4. SCHEMATIC DIAGRAM — D/A CONVERTER SECTION —

• Refer to page 5 for Note.

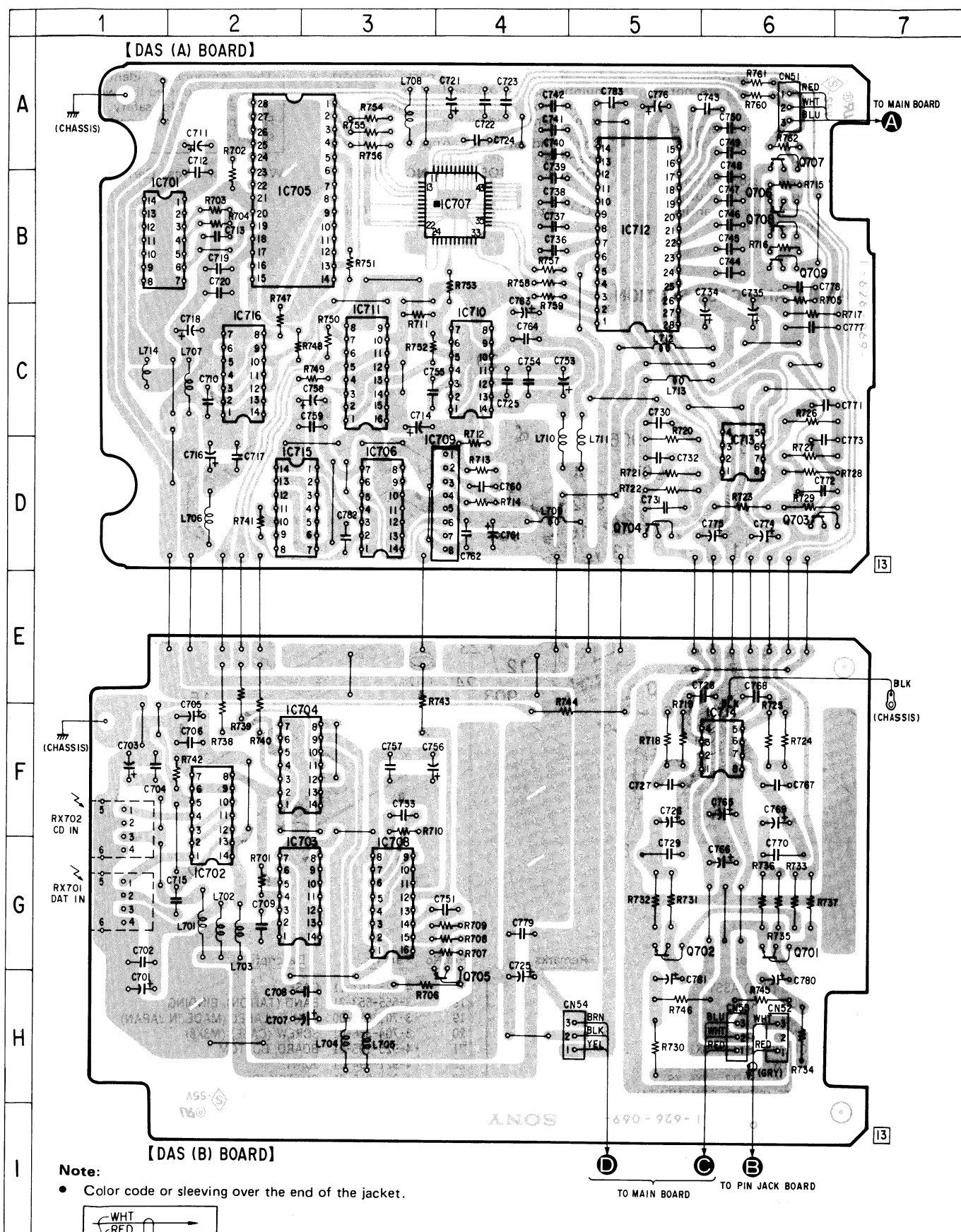




### 3-5. PRINTED WIRING BOARD — D/A CONVERTER SECTION —

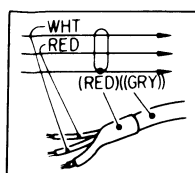
● Refer to page 4 for Semiconductor Lead Layouts.

● Refer to page 5 for Semiconductor Location.



**Note:**

- Color code or sleeving over the end of the jacket.



- ○ : parts extracted from the component side.
- ■ : parts mounted on the conductor side.

## SECTION 4 EXPLODED VIEWS

### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

- Color Indication of Appearance Parts  
Example:

(RED) ... KNOB, BALANCE (WHITE)

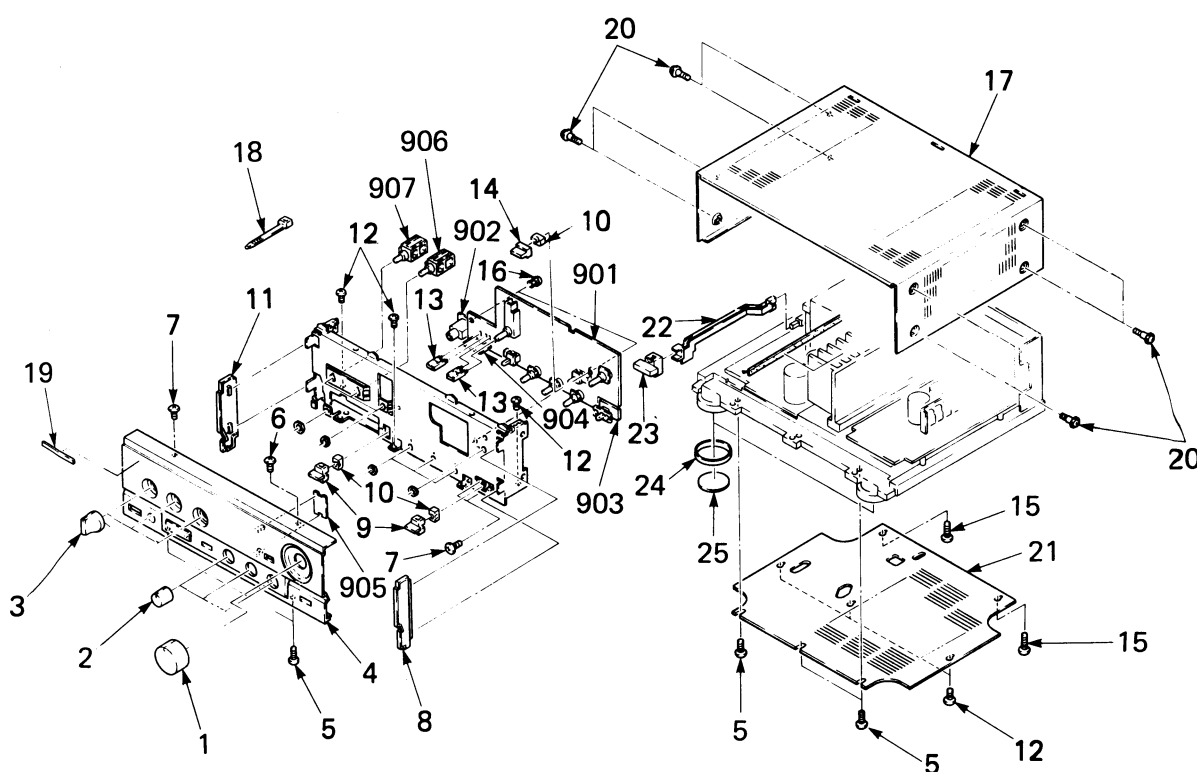
↑  
Cabinet's Color

↑  
Parts Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

WG model : West Germany model

### 4-1. FRONT PANEL AND CASE SECTION

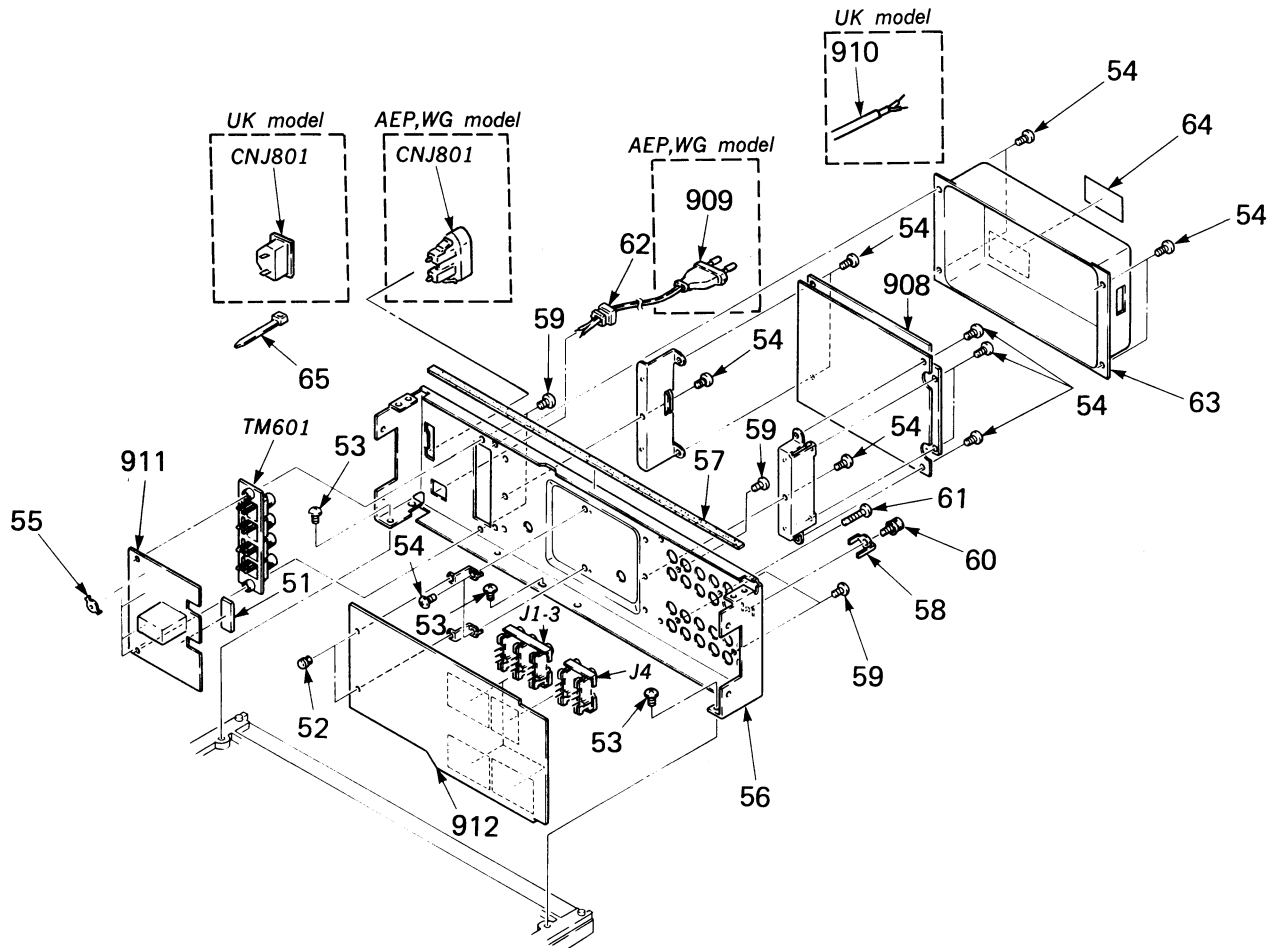


Ref.No	Part No.	Description	Remarks
1	X-4919-703-1	KNOB (VOL) ASSY	
2	4-916-746-01	KNOB (DIA.21)	
3	4-921-997-01	KNOB	
4	X-4921-902-1	PANEL ASSY	
5	7-685-874-09	SCREW +BVTT 3X12 (S)	
6	7-682-547-09	SCREW +BV 3X6, S TIGHT	
7	7-682-147-01	SCREW +BVTT 3X6 (S)	
8	4-921-995-01	PLATE (RIGHT), ORNAMENTAL	
9	4-875-721-00	KNOB, TONE CONTROL	
10	★4-864-307-00	RING	
11	4-921-996-01	PLATE (LEFT), ORNAMENTAL	
12	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
13	★4-921-998-01	HOLDER, LED	
14	2-363-012-11	KNOB (6X14), CORNER	
15	3-704-379-01	SCREW (+BV S TIGHT 3X16 CLAW)	
16	4-812-134-11	RIVET NYLON, 3.5	

Ref.No	Part No.	Description	Remarks
17	4-925-107-11	CASE	
18	3-655-653-21	BAND (TAITON), BINDING	
19	3-701-690-00	(UK)... LABEL (MADE IN JAPAN)	
20	3-704-366-01	SCREW (CASE) (M3X8)	
21	★4-925-105-01	BOARD, BOTTOM	
22	★4-921-994-01	JOINT	
23	4-921-919-01	BUTTON (P)	
24	4-921-918-11	PLATE, ORNAMENTAL	
25	4-921-906-01	FELT	
901	★A-4375-367-A	MOUNTED PCB, CONTROL	
902	★1-626-064-11	PC BOARD, HEADPHONE	
903	★1-626-068-11	PC BOARD, ADAPTOR SW	
904	★1-626-067-11	PC BOARD, LED (C)	
905	★1-626-066-11	PC BOARD, LED (B)	
906	1-571-463-11	SWITCH, ROTARY SLIDE	
907	1-571-464-11	SWITCH, ROTARY SLIDE	



## 4-2. BACK PANEL SECTION

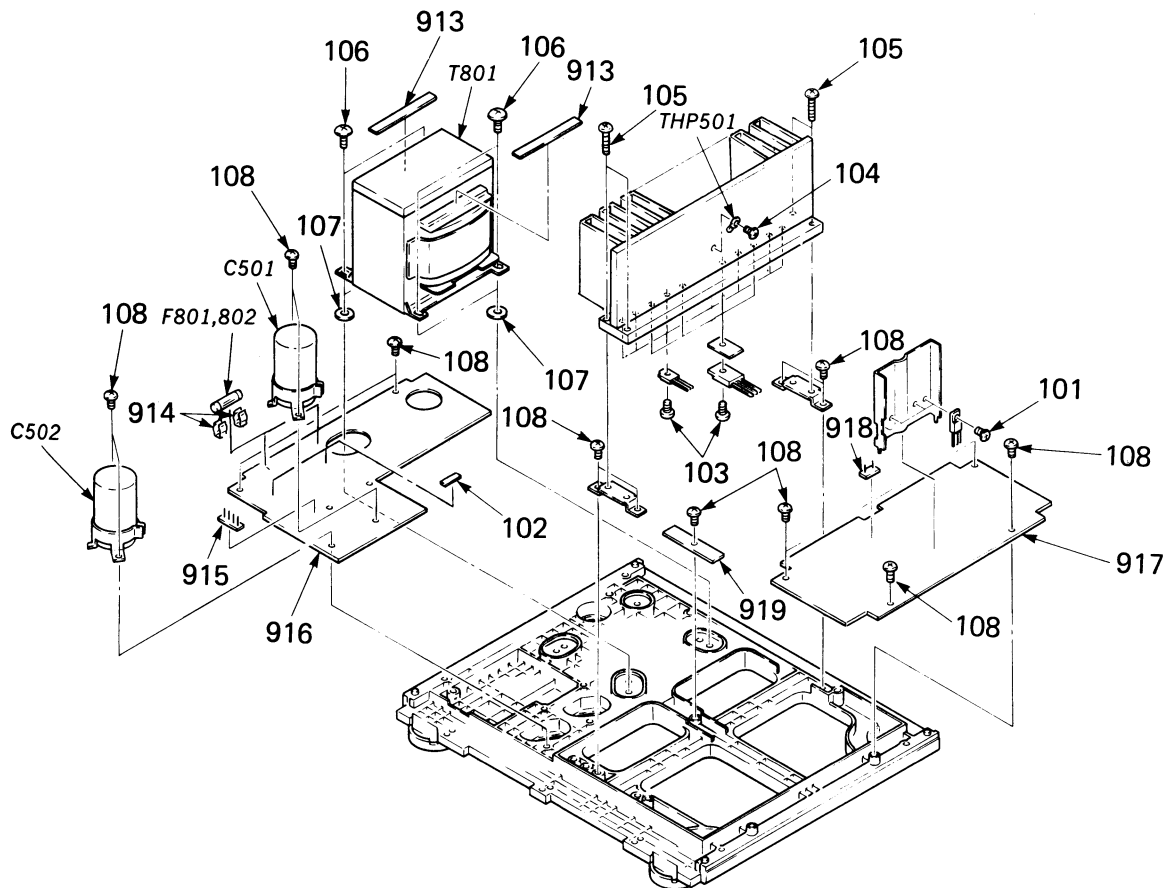




**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.






Ref.No	Part No.	Description	Remarks
51	*4-883-473-00	SPACER, CASSETTE LID	
52	4-812-134-11	RIVET NYLON, 3.5	
53	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
54	7-682-147-01	SCREW +BVTT 3X6 (S)	
55	*4-923-808-01	PLATE	
56	*4-921-958-11	(AEP, WG)....PANEL, BACK	
56	*4-921-958-21	(UK)....PANEL, BACK	
57	9-911-815-01	CUSHION	
58	3-701-993-00	SPACER, TERMINAL	
59	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT	
60	*3-706-165-00	SCREW	
61	3-704-242-01	SCREW, TERMINAL, + BVTP CLAW	
62	*3-703-244-00	BUSHING (2104), CORD	

Ref.No	Part No.	Description	Remarks
63	*4-925-101-01	CASE, SHIELD	
64	*4-921-954-11	(AEP)....LABEL, MODEL NUMBER (AE)	
64	*4-921-955-01	(UK)....LABEL MODEL NUMBER (UK)	
64	*4-921-957-01	(WG)....LABEL, MODEL NUMBER (AE4)	
65	3-655-653-21	BAND (TAITON), BINDING	
908	*A-4335-813-A	MOUNTED PCB, DAS	
909	⚠.1-555-750-00	(AEP, WG)....CORD, POWER	
910	⚠.1-556-035-00	(UK)....CORD, POWER	
911	*1-626-059-11	PC BOARD, SPEAKER	
912	*1-626-063-11	PC BOARD, PIN JACK	
CNJ801	⚠.1-526-751-00	(UK)....OUTLET, AC	
CNJ801	⚠.1-526-794-11	(AEP, WG)....OUTLET, AC	
TM601	1-536-571-21	TERMINAL BOARD, 4P	

## 4-3. CHASSIS SECTION



**Note:** The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
101	7-682-547-09	SCREW B 3X6		917	*A-4410-769-A	(AEP, WG)....MOUNTED PCB, MAIN	
102	3-701-947-15	LABEL, FUSE		917	*A-4410-770-A	(UK)....MOUNTED PCB, MAIN	
103	7-682-549-09	SCREW +B 3X10		918	 *1-535-115-00	TERMINAL	
104	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT		919	*1-626-058-11	PC BOARD, WIRE CLAMP	
105	7-685-876-09	SCREW +BVTT 3X16 (S)		C501	1-125-519-11	ELECT 12000MF 20% 50V	
106	4-304-494-11	SCREW, TAPPING, +PW4X16		C502	1-125-519-11	ELECT 12000MF 20% 50V	
107	4-916-751-01	WASHER		F801	 1-532-286-00	FUSE, TIME-LAG (2.5A)	
108	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT		F802	 1-532-286-00	(AEP, WG)....FUSE, TIME-LAG (2.5A)	
913	*1-626-061-11	PC BOARD, ELECTRICITY PREVENTION		THP501	1-800-427-00	POSISTOR	
914	*1-533-185-11	HOLDER, FUSE		T801	 1-449-227-11	(UK)....TRANSFORMER, POWER	
915	*1-535-117-00	TERMINAL		T801	 1-449-228-11	(AEP, WG)....TRANSFORMER, POWER	
916	*1-626-060-11	PC BOARD, POWER					

## SECTION 5 ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

**CAPACITORS:**MF:  $\mu$ F, PF:  $\mu$ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

**COILS**

- MMH: mH, UH:  $\mu$ H

**SEMICONDUCTORS**In each case, U:  $\mu$ , for example:UA...:  $\mu$ A..., UPA...:  $\mu$ PA...,UPC...:  $\mu$ PC, UPD...:  $\mu$ PD...

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

WG model : West Germany model



Ref.No	Part No.	Description
901	*A-4375-367-A	MOUNTED PCB, CONTROL
902	*1-626-064-11	PC BOARD, HEADPHONE
903	*1-626-068-11	PC BOARD, ADAPTOR SW
904	*1-626-067-11	PC BOARD, LED (C)
905	*1-626-006-11	PC BOARD, LED (B)
906	1-571-463-11	SWITCH, ROTARY SLIDE
907	1-571-464-11	SWITCH, ROTARY SLIDE
908	*A-4335-813-A	MOUNTED PCB, DAS
909	$\Delta$ 1-555-750-00	(AEP, WG)....CORD, POWER
910	$\Delta$ 1-556-035-00	(UK)....CORD, POWER
911	*1-626-059-11	PC BOARD, SPEAKER
912	*1-626-063-11	PC BOARD, PIN JACK
913	*1-626-061-11	PC BOARD, ELECTRICITY PREVENTION
914	*1-533-185-11	HOLDER, FUSE
915	*1-535-117-00	TERMINAL
916	*1-626-060-11	PC BOARD, POWER
917	*A-4410-769-A	(AEP, WG)....MOUNTED PCB, MAIN
917	*A-4410-770-A	(UK)....MOUNTED PCB, MAIN
918	$\Delta$ 1-535-115-00	TERMINAL
919	*1-626-058-11	PC BOARD, WIRE CLAMP
920	*1-535-119-00	(AEP, WG)....TERMINAL

**CAPACITOR**

C101	1-124-499-11	ELECT	1MF	20%	50V
C102	1-162-282-31	CERAMIC	100PF	10%	50V
C103	1-162-219-31	CERAMIC	68PF	5%	50V
C104	1-124-477-11	ELECT	47MF	20%	16V
C105	1-130-480-00	MYLAR	0.0056MF	5%	50V
C106	1-130-473-00	MYLAR	0.0015MF	5%	50V
C107A	1-124-499-11	ELECT	1MF	20%	50V
C107B	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C108	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C109	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C110	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C111	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C112	1-162-282-31	(WG)....CERAMIC	100PF	10%	50V
C113	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C114	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C115	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C116	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C117	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C151	1-124-499-11	ELECT	1MF	20%	50V
C152	1-162-282-31	CERAMIC	100PF	10%	50V
C153	1-162-219-31	CERAMIC	68PF	5%	50V
C154	1-124-477-11	ELECT	47MF	20%	16V
C155	1-130-480-00	MYLAR	0.0056MF	5%	50V
C156	1-130-473-00	MYLAR	0.0015MF	5%	50V
C157A	1-124-499-11	ELECT	1MF	20%	50V
C157B	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C158	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C159	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C160	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V

C161	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C162	1-162-282-31	(WG)....CERAMIC	100PF	10%	50V
C163	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C164	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C165	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C166	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C167	1-162-286-31	(WG)....CERAMIC	220PF	10%	50V
C201	1-123-611-00	ELECT	1MF	20%	50V
C202	1-124-261-00	ELECT	10MF	20%	50V
C203	1-136-157-00	FILM	0.022MF	5%	50V
C204	1-130-475-00	MYLAR	0.0022MF	5%	50V
C205	1-136-157-00	FILM	0.022MF	5%	50V
C206	1-162-219-31	CERAMIC	68PF	5%	50V
C207	1-124-261-00	ELECT	10MF	20%	50V
C208	1-136-167-00	FILM	0.15MF	5%	50V
C209	1-162-282-31	CERAMIC	100PF	10%	50V
C230	1-161-494-00	CERAMIC	0.022MF		50V
C251	1-123-611-00	ELECT	1MF	20%	50V
C252	1-124-261-00	ELECT	10MF	20%	50V
C253	1-136-157-00	FILM	0.022MF	5%	50V
C254	1-130-475-00	MYLAR	0.0022MF	5%	50V
C255	1-136-157-00	FILM	0.022MF	5%	50V
C256	1-162-219-31	CERAMIC	68PF	5%	50V
C257	1-124-261-00	ELECT	10MF	20%	50V
C258	1-136-167-00	FILM	0.15MF	5%	50V
C259	1-162-282-31	CERAMIC	100PF	10%	50V
C301	1-124-477-11	ELECT	47MF	20%	16V
C302	1-124-477-11	ELECT	47MF	20%	16V
C303	1-124-236-00	ELECT	47MF	20%	16V
C304	1-124-236-00	ELECT	47MF	20%	16V
C305	1-123-875-11	ELECT	10MF	20%	50V
C306	1-124-261-00	ELECT	10MF	20%	50V
C307	1-123-661-00	ELECT	100MF	20%	6.3V
C308	1-123-661-00	ELECT	100MF	20%	6.3V
C309	1-123-661-00	ELECT	100MF	20%	6.3V
C310	1-124-236-00	ELECT	47MF	20%	16V
C311	1-124-236-00	ELECT	47MF	20%	16V
C401	1-123-380-00	ELECT	1MF	20%	100V
C402	1-107-169-00	MICA	100PF	5%	100V
C403	1-104-233-00	POLYSTYRENE	220PF	5%	125V
C404	1-126-101-11	ELECT	100MF	20%	10V
C405	1-126-101-11	ELECT	100MF	20%	10V
C406	1-107-159-00	MICA	33PF	5%	100V
C407	1-107-159-00	(AEP, UK)....MICA	33PF	5%	100V
C407	1-107-169-00	(WG)....MICA	100PF	5%	100V
C408	1-126-101-11	ELECT	100MF	20%	10V
C409	1-107-159-00	(AEP, UK)....MICA	33PF	5%	100V
C409	1-107-169-00	(WG)....MICA	100PF	5%	100V
C410	1-107-202-00	MICA	10PF	0.5PF	100V
C411	1-126-101-11	ELECT	100MF	20%	10V
C412	1-136-161-00	FILM	0.047MF	5%	50V
C413	1-136-161-00	FILM	0.047MF	5%	50V

Ref.No	Part No.	Description							
C430	1-161-494-00	CERAMIC	0.0022MF	25V					
C431	1-162-207-31	CERAMIC	22PF	5%	50V				
C432	1-162-282-31	CERAMIC	100PF	10%	50V				
C451	1-123-380-00	ELECT	1MF	20%	100V				
C452	1-107-169-00	MICA	100PF	5%	100V				
C453	1-104-233-00	POLYSTYRENE	220PF	5%	125V				
C454	1-126-101-11	ELECT	100MF	20%	10V				
C455	1-126-101-11	ELECT	100MF	20%	10V				
C456	1-107-159-00	MICA	33PF	5%	100V				
C457	1-107-159-00	(AEP, UK)....MICA	33PF	5%	100V				
C457	1-107-169-00	(WG)....MICA	100PF	5%	100V				
C458	1-126-101-11	ELECT	100MF	20%	10V				
C459	1-107-159-00	(AEP, UK)....MICA	33PF	5%	100V				
C459	1-107-169-00	(WG)....MICA	100PF	5%	100V				
C460	1-107-202-00	MICA	10PF	0.5PF	100V				
C461	1-126-101-11	ELECT	100MF	20%	10V				
C462	1-136-161-00	FILM	0.047MF	5%	50V				
C463	1-136-161-00	FILM	0.047MF	5%	50V				
C480	1-161-494-00	CERAMIC	0.0022MF	25V					
C481	1-162-207-31	CERAMIC	22PF	5%	50V				
C482	1-162-282-31	CERAMIC	100PF	10%	50V				
C501	1-125-519-11	ELECT	12000MF	20%	50V				
C502	1-125-519-11	ELECT	12000MF	20%	50V				
C505	1-123-380-00	ELECT	1MF	20%	100V				
C506	1-123-380-00	ELECT	1MF	20%	100V				
C507	1-124-122-11	ELECT	100MF	20%	50V				
C508	1-124-122-11	ELECT	100MF	20%	50V				
C509	1-124-499-11	ELECT	1MF	20%	50V				
C510	1-124-499-11	ELECT	1MF	20%	50V				
C511	1-124-499-11	ELECT	1MF	20%	50V				
C512	1-124-499-11	ELECT	1MF	20%	50V				
C513	1-124-122-11	ELECT	100MF	20%	50V				
C514	1-124-122-11	ELECT	100MF	20%	50V				
C555	1-123-380-00	ELECT	1MF	20%	100V				
C556	1-123-380-00	ELECT	1MF	20%	100V				
C601	1-136-164-00	(WG)....FILM	0.082MF	5%	50V				
C602	1-136-164-00	(WG)....FILM	0.082MF	5%	50V				
C605	1-161-326-00	(WG)....CERAMIC	0.0022MF	30%	50V				
C651	1-136-164-00	(WG)....FILM	0.082MF	5%	50V				
C652	1-136-164-00	(WG)....FILM	0.082MF	5%	50V				
C655	1-161-326-00	(WG)....CERAMIC	0.0022MF	30%	50V				
C701	1-124-261-00	ELECT	10MF	20%	50V				
C702	1-136-153-00	FILM	0.01MF	5%	50V				
C703	1-124-261-00	ELECT	10MF	20%	50V				
C704	1-136-153-00	FILM	0.01MF	5%	50V				
C705	1-124-261-00	ELECT	10MF	20%	50V				
C706	1-136-153-00	FILM	0.01MF	5%	50V				
C707	1-124-261-00	ELECT	10MF	20%	50V				
C708	1-136-153-00	FILM	0.01MF	5%	50V				
C709	1-162-213-31	CERAMIC	39PF	5%	50V				
C710	1-162-213-31	CERAMIC	39PF	5%	50V				
C711	1-124-261-00	ELECT	10MF	20%	50V				
C712	1-136-153-00	FILM	0.01MF	5%	50V				
C713	1-136-165-00	FILM	0.1MF	5%	50V				
C714	1-124-261-00	ELECT	10MF	20%	50V				
C715	1-136-165-00	FILM	0.1MF	5%	50V				
C716	1-124-261-00	ELECT	10MF	20%	50V				
C717	1-136-153-00	FILM	0.01MF	5%	50V				
C718	1-124-472-11	ELECT	470MF	20%	10V				
C719	1-136-153-00	FILM	0.01MF	5%	50V				
C720	1-136-153-00	FILM	0.01MF	5%	50V				
C721	1-124-472-11	ELECT	470MF	20%	10V				
C722	1-136-153-00	FILM	0.01MF	5%	50V				
C723	1-136-153-00	FILM	0.01MF	5%	50V				
C724	1-136-165-00	FILM	0.1MF	5%	50V				
C725	1-124-471-00	ELECT	1000MF	20%	6.3V				
C726	1-123-330-00	ELECT	22MF	20%	25V				
C727	1-136-022-11	FILM	0.002MF	5%	50V				
C728	1-136-019-11	FILM	0.0011MF	5%	50V				
C729	1-130-029-00	FILM	0.0082MF	5%	50V				
C730	1-136-022-11	FILM	0.002MF	5%	50V				
C731	1-130-738-00	FILM	0.015MF	5%	50V				
C732	1-136-287-11	FILM	0.0047MF	5%	50V				
C733	1-101-361-00	CERAMIC	150PF	5%	50V				
C734	1-124-120-11	ELECT	220MF	20%	25V				
C735	1-124-120-11	ELECT	220MF	20%	25V				
C736	1-136-165-00	FILM	0.1MF	5%	50V				
C737	1-136-165-00	FILM	0.1MF	5%	50V				
C738	1-136-165-00	FILM	0.1MF	5%	50V				
C739	1-136-165-00	FILM	0.1MF	5%	50V				
C740	1-136-165-00	FILM	0.1MF	5%	50V				
C741	1-136-165-00	FILM	0.1MF	5%	50V				
C742	1-136-165-00	FILM	0.1MF	5%	50V				
C743	1-162-290-31	CERAMIC	470PF	10%	50V				
C744	1-136-165-00	FILM	0.1MF	5%	50V				
C745	1-136-165-00	FILM	0.1MF	5%	50V				
C746	1-136-165-00	FILM	0.1MF	5%	50V				
C747	1-136-165-00	FILM	0.1MF	5%	50V				
C748	1-136-165-00	FILM	0.1MF	5%	50V				
C749	1-136-165-00	FILM	0.1MF	5%	50V				
C750	1-136-165-00	FILM	0.1MF	5%	50V				
C751	1-101-884-00	CERAMIC	56PF	5%	50V				
C752	1-136-153-00	FILM	0.01MF	5%	50V				
C753	1-124-120-11	ELECT	220MF	20%	25V				
C754	1-136-153-00	FILM	0.01MF	5%	50V				
C755	1-162-209-31	CERAMIC	27PF	5%	50V				
C756	1-124-471-00	ELECT	1000MF	20%	6.3V				
C757	1-136-153-00	FILM	0.01MF	5%	50V				
C758	1-124-261-00	ELECT	10MF	20%	50V				
C759	1-136-153-00	FILM	0.01MF	5%	50V				
C760	1-136-173-00	FILM	0.47MF	5%	50V				
C761	1-124-261-00	ELECT	10MF	20%	50V				
C762	1-136-153-00	FILM	0.01MF	5%	50V				
C763	1-124-261-00	ELECT	10MF	20%	50V				
C764	1-136-153-00	FILM	0.01MF	5%	50V				
C765	1-124-120-11	ELECT	220MF	20%	25V				
C766	1-124-120-11	ELECT	220MF	20%	25V				
C767	1-136-022-11	FILM	0.002MF	5%	50V				
C768	1-136-019-11	FILM	0.0011MF	5%	50V				
C769	1-123-330-00	ELECT	22MF	20%	25V				
C770	1-130-029-00	FILM	0.0082MF	5%	50V				
C771	1-136-022-11	FILM	0.002MF	5%	50V				
C772	1-130-738-00	FILM	0.015MF	5%	50V				
C773	1-136-287-11	FILM	0.0047MF	5%	50V				
C774	1-124-120-11	ELECT	220MF	20%	25V				
C775	1-124-120-11	ELECT	220MF	20%	25V				
C776	1-124-120-11	ELECT	220MF	20%	25V				
C777	1-162-291-31	CERAMIC	560PF	10%	50V				
C778	1-162-291-31	CERAMIC	560PF	10%	50V				
C779	1-136-165-00	FILM	0.1MF	5%	50V				
C780	1-123-330-00	ELECT	22MF	20%	25V				
C781	1-123-330-00	ELECT	22MF	20%	25V				
C782	1-102-110-00	CERAMIC	220PF	10%	50V				
C783	1-162-851-11	CERAMIC	0.1MF	10%	16V				
C801	△.1-161-744-00	CERAMIC	0.01MF		400V				
C802	△.1-161-744-00	CERAMIC	0.01MF		400V				
CN2	*1-564-509-11	PLUG, CONNECTOR 6P							
CN3	*1-564-507-41	PLUG, CONNECTOR 4P							
CN6	*1-564-508-11	PLUG, CONNECTOR 5P							
CN7	*1-564-505-11	PLUG, CONNECTOR 2P							

**Note:** The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.



Ref.No	Part No.	Description
CN8	*1-564-505-41	PLUG, CONNECTOR 2P
CN9	*1-564-506-11	PLUG, CONNECTOR 3P
CN11	*1-564-508-11	PLUG, CONNECTOR 5P
CN12	*1-564-509-11	PLUG, CONNECTOR 6P
CN13	*1-564-509-11	PLUG, CONNECTOR 6P
CN14	*1-564-512-41	PLUG, CONNECTOR 9P
CN15	*1-564-512-41	PLUG, CONNECTOR 9P
CN16	*1-564-509-11	PLUG, CONNECTOR 6P
CN17	*1-564-506-11	PLUG, CONNECTOR 3P
CN18	*1-564-506-11	PLUG, CONNECTOR 3P
CN26	*1-564-512-11	PLUG, CONNECTOR 9P
CN32	*1-564-509-11	PLUG, CONNECTOR 6P
CN33	*1-564-518-11	PLUG, CONNECTOR 3P
CN52	*1-564-506-11	PLUG, CONNECTOR 3P
CNJ801A	1-526-751-00	(UK)....OUTLET, AC
CNJ801A	1-526-794-11	(AEP, WG)....OUTLET, AC
D301	8-719-200-77	DIODE 10E2N
D302	8-719-200-77	DIODE 10E2N
D303	8-719-000-26	DIODE US1060M
D304	8-719-000-26	DIODE US1060M
D306	8-719-000-26	DIODE US1060M
D307	8-719-000-26	DIODE US1060M
D308	8-719-000-26	DIODE US1060M
D309	8-719-301-52	DIODE SEL2810A-C
D311	8-719-310-23	DIODE SEL1513E-CD
D312	8-719-310-23	DIODE SEL1513E-CD
D314	8-719-301-38	DIODE SEL2210S-C
D315	8-719-303-00	DIODE SEL2510C-C
D401	8-719-301-38	DIODE SEL2210S-C
D402	8-719-000-26	DIODE US1060M
D403	8-719-000-26	DIODE US1060M
D404	8-719-000-26	DIODE US1060M
D405	8-719-000-26	DIODE US1060M
D406	8-719-000-26	DIODE US1060M
D407	8-719-000-26	DIODE US1060M
D451	8-719-301-38	DIODE SEL2210S-C
D452	8-719-000-26	DIODE US1060M
D453	8-719-000-26	DIODE US1060M
D454	8-719-000-26	DIODE US1060M
D455	8-719-000-26	DIODE US1060M
D501	8-719-302-38	DIODE RBV-602-01
D506	8-719-000-26	DIODE US1060M
D507	8-719-000-26	DIODE US1060M
F801	Δ.1-532-286-00	FUSE, TIME-LAG (2.5A)
F802	Δ.1-532-286-00	(AEP, WG)....FUSE, TIME-LAG (2.5A)
IC101	8-759-600-02	IC M5218L
IC201	8-759-600-02	IC M5218L
IC251	8-759-600-02	IC M5218L
IC301	8-759-111-68	IC UPC1237HA
IC501	8-759-604-34	IC M5F7815
IC502	8-759-604-52	IC M5F7915
IC503	8-759-604-29	IC M5F7805
IC504	8-759-604-47	IC M5F7905
IC701	8-759-202-13	IC TC74HC04P
IC702	8-759-202-11	IC TC74HC00P
IC703	8-759-202-24	IC TC74HC86P
IC704	8-759-000-99	IC MC74HC74N
IC705	8-752-322-31	IC CXD1076P
IC706	8-759-000-99	IC MC74HC74N
IC707	8-759-939-35	IC CXD1088Q
IC708	8-759-202-86	IC TC74HC123P
IC709	8-759-918-71	IC CX23065
IC710	8-759-906-24	IC SN74LS624N
IC711	8-759-202-85	IC TC74HC112P
IC712	8-759-939-94	IC TDA1541-N5

Ref.No	Part No.	Description
IC713	8-759-701-21	IC NJM5532D-D
IC714	8-759-701-21	IC NJM5532D-D
IC715	8-759-203-40	IC TC74HC393P
IC716	8-759-202-24	IC TC74HC86P
ICR501A	1-532-686-21	LINK, IC ICP-N75 2.7A
ICR502A	1-532-686-21	LINK, IC ICP-N75 2.7A
ICR503A	1-532-686-21	LINK, IC ICP-N75 2.7A
ICR504A	1-532-686-21	LINK, IC ICP-N75 2.7A
J1	1-565-304-11	JACK, PIN 4P (PHONO IN, TUNER IN)
J2	1-565-305-11	JACK, PIN 6P (ADAPTOR IN/OUT, DAT OUT)
J3	1-565-305-11	JACK, PIN 6P (TAPE 1 IN, TAPE 1 REC OUT, TAPE 2 REC OUT)
J4	1-565-305-11	JACK, PIN 6P (TAPE 2 IN, VIDEO /CD IN/OUT)
J601	1-565-305-11	JACK, LARGE TYPE 1P (HEADPHONES)
L401	*1-420-872-00	COIL, AIR CORE 1.9UH
L451	*1-420-872-00	COIL, AIR CORE 1.9UH
L701	1-408-571-00	INDUCTOR 47UH
L702	1-408-571-00	INDUCTOR 47UH
L703	1-408-559-00	INDUCTOR 4.7UH
L704	1-408-559-00	INDUCTOR 4.7UH
L705	1-408-559-00	INDUCTOR 4.7UH
L706	1-408-559-00	INDUCTOR 4.7UH
L707	1-408-559-00	INDUCTOR 4.7UH
L708	1-408-559-00	INDUCTOR 4.7UH
L709	1-408-559-00	INDUCTOR 4.7UH
L710	1-408-559-00	INDUCTOR 4.7UH
L711	1-408-559-00	INDUCTOR 4.7UH
L712	1-408-559-00	INDUCTOR 4.7UH
L713	1-408-559-00	INDUCTOR 4.7UH
L714	1-408-930-00	INDUCTOR 33MMH
Q301	8-729-209-15	TRANSISTOR 2SD2012
Q302	8-729-117-54	TRANSISTOR 2SA1175
Q303	8-729-600-27	TRANSISTOR 2SC634SP
Q304	8-729-117-54	TRANSISTOR 2SA1175
Q305	8-729-117-54	TRANSISTOR 2SA1175
Q306	8-729-600-27	TRANSISTOR 2SC634SP
Q307	8-729-600-27	TRANSISTOR 2SC634SP
Q308	8-729-600-27	TRANSISTOR 2SC634SP
Q401	8-729-625-91	TRANSISTOR 2SC2259
Q403	8-729-191-62	TRANSISTOR 2SA916-L
Q404	8-729-191-62	TRANSISTOR 2SA916-L
Q405	8-729-194-12	TRANSISTOR 2SC1941
Q406	8-729-191-62	TRANSISTOR 2SA916-L
Q407	8-729-209-15	TRANSISTOR 2SD2012
Q408	8-729-194-12	TRANSISTOR 2SC1941
Q409	8-729-194-12	TRANSISTOR 2SC1941
Q410	8-729-191-62	TRANSISTOR 2SA916-L
Q411	8-729-120-05	TRANSISTOR 2SC4431-L
Q412	8-729-120-02	TRANSISTOR 2SA1684-L
Q413	8-729-304-32	TRANSISTOR 2SC3855
Q414	8-729-304-29	TRANSISTOR 2SA1491
Q415	8-729-108-05	TRANSISTOR 2SC1841TP-PA
Q451	8-729-625-91	TRANSISTOR 2SC2259
Q453	8-729-191-62	TRANSISTOR 2SA916-L
Q454	8-729-191-62	TRANSISTOR 2SA916-L
Q455	8-729-194-12	TRANSISTOR 2SC1941
Q456	8-729-191-62	TRANSISTOR 2SA916-L
Q457	8-729-209-15	TRANSISTOR 2SD2012
Q458	8-729-194-12	TRANSISTOR 2SC1941
Q459	8-729-194-12	TRANSISTOR 2SC1941
Q460	8-729-191-62	TRANSISTOR 2SA916-L
Q461	8-729-120-05	TRANSISTOR 2SC4431-L
Q462	8-729-120-02	TRANSISTOR 2SA1684-L
Q463	8-729-304-32	TRANSISTOR 2SC3855
Q464	8-729-304-29	TRANSISTOR 2SA1491

**Note:** The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description
Q465	8-729-108-05	TRANSISTOR 2SC1841-PA
Q701	8-729-107-98	TRANSISTOR 2SC3622A-L
Q702	8-729-107-98	TRANSISTOR 2SC3622A-L
Q703	8-729-107-98	TRANSISTOR 2SC3622A-L
Q704	8-729-107-98	TRANSISTOR 2SC3622A-L

Q705	8-729-117-54	TRANSISTOR 2SA1175
Q706	8-729-115-15	TRANSISTOR BNIA4M
Q707	8-729-115-75	TRANSISTOR BAIA4M
Q708	8-729-115-15	TRANSISTOR BAIN4M
Q709	8-729-115-75	TRANSISTOR BAIA4M

## RESISTOR

R101	1-249-441-11	CARBON	100K	5%	1/4W
R102	1-249-417-11	CARBON	1K	5%	1/4W
R103	1-249-441-11	CARBON	100K	5%	1/4W
R104	1-249-416-11	CARBON	820	5%	1/4W
R105	1-247-897-11	CARBON	560K	5%	1/4W
R106	1-249-437-11	CARBON	47K	5%	1/4W
R107	1-249-409-11	CARBON	220	5%	1/4W
R108	1-249-441-11	CARBON	100K	5%	1/4W
R109	1-249-417-11	CARBON	1K	5%	1/4W
R110	1-249-417-11	CARBON	1K	5%	1/4W
R111	1-249-417-11	CARBON	1K	5%	1/4W
R112	1-249-417-11	CARBON	1K	5%	1/4W
R113	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R114	1-247-829-00	(WG)....CARBON 820	5%	1/4W	
R115	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R116	1-249-417-11	CARBON	1K	5%	1/4W
R117	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R118	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R119	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R151	1-249-441-11	CARBON	100K	5%	1/4W
R152	1-249-417-11	CARBON	1K	5%	1/4W
R153	1-249-441-11	CARBON	100K	5%	1/4W
R154	1-249-416-11	CARBON	820	5%	1/4W
R155	1-247-897-11	CARBON	560K	5%	1/4W
R156	1-249-437-11	CARBON	47K	5%	1/4W
R157	1-249-409-11	CARBON	220	5%	1/4W
R158	1-249-441-11	CARBON	100K	5%	1/4W
R159	1-249-417-11	CARBON	1K	5%	1/4W
R160	1-249-417-11	CARBON	1K	5%	1/4W
R161	1-249-417-11	CARBON	1K	5%	1/4W
R162	1-249-417-11	CARBON	1K	5%	1/4W
R163	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R164	1-247-829-00	(WG)....CARBON 820	5%	1/4W	
R165	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R166	1-249-417-11	CARBON	1K	5%	1/4W
R167	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R168	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R169	1-247-831-00	(WG)....CARBON 1K	5%	1/4W	
R201	1-249-417-11	CARBON	100K	5%	1/4W
R202	1-249-441-11	CARBON	100K	5%	1/4W
R203	1-249-441-11	CARBON	100K	5%	1/4W
R204	1-249-441-11	CARBON	100K	5%	1/4W
R205	1-249-433-11	CARBON	22K	5%	1/4W
R206	1-249-429-11	CARBON	10K	5%	1/4W
R207	1-249-433-11	CARBON	22K	5%	1/4W
R210	1-249-427-11	CARBON	6.8K	5%	1/4W
R211	1-247-903-00	CARBON	1M	5%	1/4W
R212	1-249-417-11	CARBON	1K	5%	1/4W
R251	1-249-417-11	CARBON	1K	5%	1/4W
R252	1-249-441-11	CARBON	100K	5%	1/4W
R253	1-249-441-11	CARBON	100K	5%	1/4W
R254	1-249-441-11	CARBON	100K	5%	1/4W
R255	1-249-433-11	CARBON	22K	5%	1/4W

R256	1-249-429-11	CARBON	10K	5%	1/4W
R257	1-249-433-11	CARBON	22K	5%	1/4W
R260	1-249-427-11	CARBON	6.8K	5%	1/4W
R261	1-247-903-00	CARBON	1M	5%	1/4W
R262	1-249-417-11	CARBON	1K	5%	1/4W
R301	1-249-413-11	CARBON	470	5%	1/4W
R302	1-249-413-11	CARBON	470	5%	1/4W
R303	1-249-409-11	CARBON	220	5%	1/4W
R304	1-249-409-11	CARBON	220	5%	1/4W
R305	1-249-398-11	CARBON	27	5%	1/4W
R306	1-249-433-11	CARBON	22K	5%	1/4W
R307	1-249-429-11	CARBON	10K	5%	1/4W
R308	1-249-433-11	CARBON	22K	5%	1/4W
R309	1-249-433-11	CARBON	22K	5%	1/4W
R310	1-249-441-11	CARBON	100K	5%	1/4W
R311	1-249-441-11	CARBON	100K	5%	1/4W
R312	1-249-438-11	CARBON	56K	5%	1/4W
R313	1-249-487-11	CARBON	15K	5%	1/2W
R315	1-249-441-11	CARBON	100K	5%	1/4W
R316	1-249-433-11	CARBON	22K	5%	1/4W
R317	1-249-433-11	CARBON	22K	5%	1/4W
R318	1-249-441-11	CARBON	100K	5%	1/4W
R319	1-249-433-11	CARBON	22K	5%	1/4W
R320	1-249-441-11	CARBON	100K	5%	1/4W
R321	1-249-433-11	CARBON	22K	5%	1/4W
R322	1-249-433-11	CARBON	22K	5%	1/4W
R323	1-249-429-11	CARBON	10K	5%	1/4W
R324	1-249-433-11	CARBON	22K	5%	1/4W
R325	1-249-407-11	CARBON	150	5%	1/4W
R327	1-249-433-11	CARBON	22K	5%	1/4W
R328	1-247-749-11	CARBON	560	5%	1/2W
R329	1-249-409-11	CARBON	220	5%	1/4W
R331	1-247-749-11	CARBON	560	5%	1/2W
R401	1-246-545-00	CARBON	1M	5%	1/4W
R402	1-247-713-11	CARBON	1K	5%	1/4W
R403	1-249-469-11	CARBON	100K	5%	1/4W
R404	△.1-212-998-00	FUSIBLE	470	5%	1/2W F
R405	△.1-212-998-00	FUSIBLE	470	5%	1/2W F
R406	1-247-700-11	CARBON	100	5%	1/4W
R407	△.1-212-994-00	FUSIBLE	330	5%	1/2W F
R408	1-249-492-11	CARBON	47K	5%	1/2W
R409	△.1-212-990-00	FUSIBLE	220	5%	1/2W F
R410	1-247-718-11	CARBON	2.7K	5%	1/4W
R411	1-247-710-11	CARBON	560	5%	1/4W
R412	△.1-212-990-00	FUSIBLE	220	5%	1/2W F
R413	△.1-212-982-00	FUSIBLE	100	5%	1/2W F
R414	△.1-212-998-00	FUSIBLE	470	5%	1/2W F
R415	△.1-212-982-00	FUSIBLE	100	5%	1/2W F
R416	△.1-212-958-00	FUSIBLE	10	5%	1/2W F
R417	△.1-212-990-00	FUSIBLE	220	5%	1/2W F
R418	△.1-212-958-00	FUSIBLE	10	5%	1/2W F
R419	△.1-217-611-00	METAL PLATE	0.1	10%	2W
R420	△.1-217-611-00	METAL PLATE	0.1	10%	2W
R421	1-249-496-11	CARBON	100K	5%	1/2W
R422	1-247-749-11	CARBON	560	5%	1/2W
R424	1-247-727-11	CARBON	10	5%	1/2W
R425	1-247-700-11	CARBON	100	5%	1/4W
R426	1-249-431-11	CARBON	15K	5%	1/4W
R427	1-249-437-11	CARBON	47K	5%	1/4W
R428	1-247-713-11	CARBON	1K	5%	1/4W
R429	1-249-485-11	CARBON	8.2	5%	1/2W
R430	△.1-213-096-00	FUSIBLE	330	5%	1W F
R451	1-246-545-00	CARBON	1M	5%	1/4W
R452	1-247-713-11	CARBON	1K	5%	1/4W
R453	1-249-469-11	CARBON	100K	5%	1/4W

**Note:** The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description
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R454	△.1-212-998-00	FUSIBLE	470	5%	1/2W	F
R455	△.1-212-998-00	FUSIBLE	470	5%	1/2W	F
R456	1-247-700-11	CARBON	100	5%	1/4W	
R457	△.1-212-994-00	FUSIBLE	330	5%	1/2W	F
R458	1-249-492-11	CARBON	47K	5%	1/2W	
R459	△.1-212-990-00	FUSIBLE	220	5%	1/2W	F
R460	1-247-718-11	CARBON	2.7K	5%	1/4W	
R461	1-247-710-11	CARBON	560	5%	1/4W	
R462	△.1-212-990-00	FUSIBLE	220	5%	1/2W	F
R463	△.1-212-982-00	FUSIBLE	100	5%	1/2W	F
R464	△.1-212-998-00	FUSIBLE	470	5%	1/2W	F
R465	△.1-212-982-00	FUSIBLE	100	5%	1/2W	F
R466	△.1-212-958-00	FUSIBLE	10	5%	1/2W	F
R467	△.1-212-990-00	FUSIBLE	220	5%	1/2W	F
R468	△.1-212-958-00	FUSIBLE	10	5%	1/2W	F
R469	△.1-217-611-00	METAL PLATE	0.1	10%	2W	
R470	△.1-217-611-00	METAL PLATE	0.1	10%	2W	
R471	1-249-496-11	CARBON	100K	5%	1/2W	
R472	1-247-749-11	CARBON	560	5%	1/2W	
R474	1-247-727-11	CARBON	10	5%	1/2W	
R475	1-247-700-11	CARBON	100	5%	1/4W	
R476	1-249-431-11	CARBON	15K	5%	1/4W	
R477	1-249-438-11	CARBON	56K	5%	1/4W	
R478	1-247-713-11	CARBON	1K	5%	1/4W	
R479	1-249-485-11	CARBON	8.2	5%	1/2W	
R480	△.1-213-096-00	FUSIBLE	330	5%	1W	F
R501	1-247-746-11	CARBON	390	5%	1/2W	
R502	△.1-207-932-00	WIREWOUND	27	10%	5W	F
R503	△.1-207-932-00	WIREWOUND	27	10%	5W	F
R504	△.1-207-932-00	WIREWOUND	27	10%	5W	F
R505	△.1-207-934-00	WIREWOUND	120	10%	5W	F
R506	△.1-207-682-00	WIREWOUND	47	10%	5W	F
R507	1-247-747-11	CARBON	470	5%	1/2W	
R508	1-247-755-11	CARBON	1.8K	5%	1/2W	
R509	1-247-755-11	CARBON	1.8K	5%	1/2W	
R510	1-247-755-11	CARBON	1.8K	5%	1/2W	
R511	1-249-430-11	CARBON	12K	5%	1/4W	
R512	1-247-757-11	CARBON	2.7K	5%	1/2W	
R701	1-249-419-11	CARBON	1.5K	5%	1/4W	
R702	1-249-421-11	CARBON	2.2K	5%	1/4W	
R703	1-247-903-00	CARBON	1M	5%	1/4W	
R704	1-249-431-11	CARBON	15K	5%	1/4W	
R705	1-249-441-11	CARBON	100K	5%	1/4W	
R706	1-249-429-11	CARBON	10K	5%	1/4W	
R707	1-249-423-11	CARBON	3.3K	5%	1/4W	
R708	1-249-431-11	CARBON	15K	5%	1/4W	
R709	1-249-428-11	CARBON	8.2K	5%	1/4W	
R710	1-249-429-11	CARBON	10K	5%	1/4W	
R711	1-249-429-11	CARBON	10K	5%	1/4W	
R712	1-249-417-11	CARBON	1K	5%	1/4W	
R713	1-249-431-11	CARBON	15K	5%	1/4W	
R714	1-249-425-11	CARBON	4.7K	5%	1/4W	
R715	1-249-429-11	CARBON	10K	5%	1/4W	
R716	1-249-429-11	CARBON	10K	5%	1/4W	
R717	1-249-441-11	CARBON	100K	5%	1/4W	
R718	1-247-717-11	CARBON	2.2K	5%	1/4W	
R719	1-247-717-11	CARBON	2.2K	5%	1/4W	
R720	1-247-716-11	CARBON	1.8K	5%	1/4W	
R721	1-247-713-11	CARBON	1K	5%	1/4W	
R722	1-246-537-00	CARBON	470K	5%	1/4W	
R723	1-249-425-11	CARBON	4.7K	5%	1/4W	
R724	1-247-717-11	CARBON	2.2K	5%	1/4W	
R725	1-247-717-11	CARBON	2.2K	5%	1/4W	
R726	1-247-716-11	CARBON	1.8K	5%	1/4W	
R727	1-247-713-11	CARBON	1K	5%	1/4W	

Ref.No	Part No.	Description
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R728	1-246-537-00	CARBON	470K	5%	1/4W
R729	1-249-425-11	CARBON	4.7K	5%	1/4W
R730	1-247-712-11	CARBON	820	5%	1/4W
R731	1-247-712-11	CARBON	820	5%	1/4W
R732	1-249-465-11	CARBON	47K	5%	1/4W
R733	1-249-425-11	CARBON	4.7K	5%	1/4W
R734	1-247-712-11	CARBON	820	5%	1/4W
R735	1-247-712-11	CARBON	820	5%	1/4W
R736	1-249-465-11	CARBON	47K	5%	1/4W
R737	1-249-425-11	CARBON	4.7K	5%	1/4W
R738	1-249-413-11	CARBON	470	5%	1/4W
R739	1-249-413-11	CARBON	470	5%	1/4W
R740	1-249-413-11	CARBON	470	5%	1/4W
R741	1-249-413-11	CARBON	470	5%	1/4W
R742	1-249-433-11	CARBON	22K	5%	1/4W
R743	1-249-409-11	CARBON	220	5%	1/4W
R744	1-249-417-11	CARBON	1K	5%	1/4W
R745	1-249-465-11	CARBON	47K	5%	1/4W
R746	1-249-465-11	CARBON	47K	5%	1/4W
R747	1-249-409-11	CARBON	220	5%	1/4W
R748	1-249-409-11	CARBON	220	5%	1/4W
R749	1-249-409-11	CARBON	220	5%	1/4W
R750	1-249-409-11	CARBON	220	5%	1/4W
R751	1-249-409-11	CARBON	220	5%	1/4W
R752	1-249-409-11	CARBON	220	5%	1/4W
R753	1-249-409-11	CARBON	220	5%	1/4W
R754	1-249-409-11	CARBON	220	5%	1/4W
R755	1-249-409-11	CARBON	220	5%	1/4W
R756	1-249-409-11	CARBON	220	5%	1/4W
R757	1-249-409-11	CARBON	220	5%	1/4W
R758	1-249-409-11	CARBON	220	5%	1/4W
R759	1-249-409-11	CARBON	220	5%	1/4W
R760	1-249-417-11	CARBON	1K	5%	1/4W
R761	1-249-417-11	CARBON	1K	5%	1/4W
R762	1-249-417-11	CARBON	1K	5%	1/4W
RX701	1-464-931-11	RECEIVE UNIT, RAY			
RX702	1-464-931-11	RECEIVE UNIT, RAY			
RY501	1-515-501-00	RELAY			
RY502	1-515-683-11	RELAY			
S202	1-571-467-11	SWITCH, PUSH (1 KEY) (SOURCE DIRECT)			
S204	1-571-459-11	SWITCH, PUSH (1 KEY) (BASS BOOST)			
S205	1-571-462-11	SWITCH, ROTARY, SLIDE (OPTICAL DIGITAL SOURCE)			
S301	1-571-465-11	SWITCH, SLIDE (INPUT SELECTOR)			
S302	1-571-461-11	SWITCH, SLIDE (REC OUT SELECTOR)			
S801	△.1-554-920-21	SWITCH, PUSH (AC POWER)(1 KEY)			
S201	1-571-466-11	SWITCH, PUSH (1 KEY) (ADAPTOR)			
T801	△.1-449-227-11	(UK)...TRANSFORMER, POWER			
T801	△.1-449-228-11	(AEP, WG)...TRANSFORMER, POWER			
THP501	1-800-427-00	POSISTOR			
TM601	1-536-571-21	TERMINAL BOARD, 4P			
VR201	1-238-109-11	RES, VAR, CARBON 100K/100K (TREBLE)			
VR202	1-238-109-11	RES, VAR, CARBON 100K/100K (BASS)			
VR203	1-238-110-11	RES, VAR, CARBON 100K/100K (BALANCE)			
VR204	1-238-108-11	RES, VAR, CARBON 100K/100K (ATTENUATOR)			
VR401	1-237-455-11	RES, ADJ, CARBON 500			
VR451	1-237-455-11	RES, ADJ, CARBON 500			

**Note:** The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

<u>Ref.No</u>	<u>Part No.</u>	<u>Description</u>
<u>ACCESSORY &amp; PACKING MATERIAL</u>		
	1-559-847-11	CORD, CONNECTION
	3-786-048-11	MANUAL, INSTRUCTION
	3-786-048-41	MANUAL, INSTRUCTION
	*4-925-133-01	CUSHION, UPPER
	*4-925-134-01	CUSHION, LOWER
	*4-925-141-01	INDIVIDUAL CARTON